

Claims

1. (Canceled)
2. (Currently Amended) A self-crosslinkable copolymer consisting essentially of:
caprolactone units; and
fumarate units,
wherein the copolymer is prepared by reacting (i) poly(caprolactone) and (ii)
fumaric acid or a salt thereof, and
wherein the poly(caprolactone) has a number average molecular weight in the
range of 500-10000 daltons, and
wherein the copolymer has a number average molecular weight in the range of
3000 to 4000, and a polydispersity index in the range of 2 to 4, a melting point in
the range of 50°C to 70°C, and a hardening point in the range of 30°C to 40°C,
and
wherein the copolymer is injectable at temperatures above the melting point and
self-crosslinkable in situ without a crosslinking agent.
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)
9. (Previously Presented) The copolymer of claim 2 wherein the copolymer is
prepared by reacting poly(ϵ -caprolactone) and fumaryl chloride.

10. (Canceled).
11. (Canceled).
12. (Canceled).
13. (Canceled).
14. (Withdrawn) A crosslinkable, biodegradable material comprising:
a copolymer including caprolactone units and fumarate units; and
a free radical initiator.
15. (Withdrawn) The material of claim 14 wherein:
wherein the material is an injectable bone substitute.
16. (Withdrawn) The material of claim 11 wherein:
wherein the material is an injectable bone cement.
17. (Withdrawn) The material of claim 14 further comprising:
a porogen.
18. (Withdrawn) The material of claim 14 further comprising:
an accelerator.
19. (Withdrawn) The material of claim 14 wherein:
the material does not include a crosslinking agent.
20. (Withdrawn) The material of claim 14 further comprising:
particulate or fiber reinforcement materials.
21. (Withdrawn) The material of claim 14 wherein:
the reinforcement materials comprise hydroxyapatite.

22. (Withdrawn) The material of claim 14 wherein:

the copolymer is prepared by reacting (i) poly(ϵ -caprolactone) and (ii) fumaric acid or a salt thereof.

23. (Withdrawn) A scaffold for tissue regeneration, the scaffold comprising:

a biodegradable matrix comprising a copolymer including caprolactone units and fumarate units.

24. (Withdrawn) The scaffold of claim 23 wherein:

the copolymer is prepared by reacting (i) poly(ϵ -caprolactone) and (ii) fumaric acid or a salt thereof.

25. (Withdrawn) The scaffold of claim 23 wherein:

the matrix includes particulate or fiber reinforcement materials.

26. (Withdrawn) The scaffold of claim 25 wherein:

the reinforcement materials comprise hydroxyapatite.

27. (Withdrawn) The scaffold of claim 23 wherein:

the scaffold is porous.